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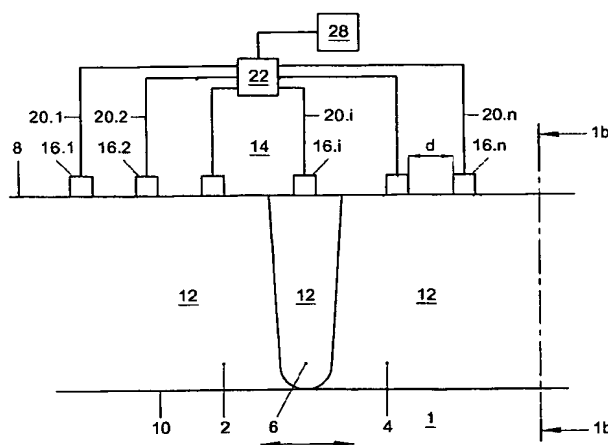
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**(54) Title:** METHOD AND APPARATUS FOR EXAMINING THE INTERIOR MATERIAL OF AN OBJECT, SUCH AS A PIPELINE OR A HUMAN BODY FROM A SURFACE OF THE OBJECT USING ULTRASOUND



**(57) Abstract:** A method for examining the interior material of an object, such as a pipeline or a human body, from a surface of an object using ultrasound having a frequency of at least 100 KHz, wherein the ultrasound is supplied to the interior material of the object. The reflections and/or diffractions of the ultrasound from the interior material of the object are received using ultrasonic receivers which are acoustically coupled to the surface of the object at positions which are distributed in two dimensions of the surface of the object, at different points in time or not, wherein, with each of the feelers, a receiving signal is generated, wherein the receiving signals are processed in combination in order to determine, according to the principle of inverse wave field extrapolation, where in the interior material of the object reflections and/or diffractions occur.

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